

Appl. No. 10/690,187
Resp. Dated Mar. 14, 2005
Reply to OA of Nov. 12, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (currently amended) A shock-absorbing guardrail comprising:

a guard fence having a back; and,
a mid-filler attachment having elliptical sides that irreversibly deforms after collision impact; and,
at least one arm affixed to the mid-filler attachment
and affixed to the back of the guard fence.

Claim 2. (currently amended) The guardrail according to claim 1 further comprising:

~~at least one arm affixed to the mid-filler attachment,~~
~~and,~~
a connector for releasably affixing the arm to the back of the guard fence.

Claim 3. (original) The guardrail according to claim 1 further comprising:

a support post affixed to the mid-filler attachment.

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Claim 4. (original) The guardrail according to claim 3
further comprising:

a shock-absorbing resin positioned between the back of
the guard fence and the support post.

Claim 5. (original) The guardrail according to claim 3
further comprising:

a shock-absorbing pipe positioned between the guard
fence and the support post.

Claim 6. (original) The guardrail according to claim 1
wherein the mid-filler attachment has an ohm-shaped cross-
section.

Claim 7. (currently amended) The guardrail according to
claim 1 further comprising:

a large mid-filler attachment having an ohm-shaped
cross section with elliptical sides that irreversibly
deforms after collision impact; and,

a small mid-filler attachment positioned within the
large mid-filler attachment, wherein the mid-filler
attachments are affixed to the back of the guard fence.

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Claim 8. (original) The guardrail according to claim 2 further comprising:

a connector wherein the mid-filler attachment is releasably affixed to the support post with the connector.

Claim 9. (original) The guardrail according to claim 1 wherein the mid-filler attachment undergoes irreversible deformation when the guard fence is impacted.

Claim 10. (currently amended) The guardrail according to claim 1 further comprising:

a structure selected from the group consisting of support poles, hydrants, semaphoric poles, bifurcations ~~(diverging point)~~, anti-collision sections, sectional walls, walls at parking lots, concrete walls, light pole foundations, and loading docks wherein the structure is affixed to the guard fence with the mid-filler attachment positioned therebetween.

Claim 11. (currently amended) The guardrail according to claim 9 further comprising:

a shock-absorbing resin positioned between the guard fence and ~~[[the]]~~ a structure.

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Claim 12. (original) The guardrail according to claim 10
further comprising:

a shock-absorbing pipe positioned between the guard
fence and the structure.

Claim 13. (original) The guardrail according to claim 12
further comprising:

a shock-absorbing resin positioned between the guard
fence and the structure.

Claim 14. (original) The guardrail according to claim 10
wherein the mid-filler attachment has an ohm-shaped cross-
section.

Claim 15. (original) The guardrail according to claim 10
wherein the mid-filler attachment has an open pipe shaped
cross-section.

Claim 16. (original) The guardrail according to claim 10
wherein the mid-filler attachment is affixed to the
structure with connection parts.

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Claim 17. (currently amended) A shock-absorbing guardrail for structures comprising:

a guard fence having a back;

a big mid-filler attachment having an ohm-shaped cross-section with elliptical sides that irreversibly deforms after collision impact; and,

a small mid-filler attachment positioned within the big mid-filler attachment, wherein the mid-filler attachments are affixed to the back of the guard fence.

Claim 18. (original) The guardrail according to claim 17 wherein the small mid-filler attachment is laminated to the big mid-filler attachment.

Claim 19. (original) The guardrail according to claim 17 wherein the big mid-filler attachment and the small mid-filler attachment are arranged in layers.

Claim 20. (original) The guardrail according to claim 17 further comprising:

a shock absorbing resin positioned within the mid-filler attachments.

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Claim 21. (currently amended) The guardrail according to claim 17 further comprising:

a structure selected from the group consisting of support poles, hydrants, semaphoric poles, bifurcations ~~(diverging point)~~, anti-collision sections, sectional walls, walls at parking lots, concrete walls, light pole foundations, and loading docks wherein the structure is affixed to the guard fence with the mid-filler attachments positioned therebetween.

Claim 22. (original) The shock-absorbing guardrail of claim 17 further comprising:

a shock-absorbing resin affixed to the back of the guard fence.

Claim 23. (original) The shock-absorbing guardrail of claim 17 further comprising:

a shock-absorbing pipe affixed to the back of the guard fence.

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Claim 24. (currently amended) A method of producing a shock absorbing guardrail comprising:

providing a guard fence having a back;

attaching a mid-filler attachment having an ohm-shaped cross-section with elliptical sides that irreversibly deforms after collision impact to the back of the guard fence.

Claim 25. (original) The method of claim 24 further comprising:

attaching the mid-filler attachment to a support post so that the mid-filler attachment is positioned between the back of the guard fence and the support post.

Claim 26. (original) The method of claim 25 further comprising:

attaching a shock absorbing resin between the back of the guard fence and the support post.

Claim 27. (original) The method of claim 24 further comprising:

attaching the mid-filler attachment to a structure so that the mid-filler attachment is positioned between the back of the guard fence and the structure.